SANTA CRUZ BIOTECHNOLOGY, INC.

SCAI siRNA (h): sc-92937

BACKGROUND

SCAI (suppressor of cancer cell invasion) is a 606 amino acid single-pass membrane protein that belongs to the SCAI family. SCAI forms a nuclear ternary complex with MRTF-A and SRF. Localizing to nucleus and cytoplasm, the SCAI protein interacts with Dia 1. The SCAI protein is also a tumor suppressor that functions to suppress MRTF-A-induced SRF transcriptional activity. SCAI not only inhibits MRTF-A but can also regulate the activities of other MRTFs such as myocardin, or the oncogenic OTT-MAL fusion protein. It has been suggested that MKL1-SRF signaling can upregulate β1-Integrin expression, thus promoting tumor cell invasiveness, whereas SCAI significantly antagonizes this process. SCAI may function in the Rho A-Dia 1 signal transduction pathway and regulate cell migration through transcriptional regulation of Integrin β1. SCAI, a binding partner and inhibitor of MKL1 that is downregulated in various tumors has been identified. Existing as two alternatively spliced isoforms, the SCAI gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito and *A. thaliana,* and maps to human chromosome 9q33.3.

REFERENCES

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3. Brandt, D.T., Baarlink, C., Kitzing, T.M., Kremmer, E., Ivaska, J., Nollau, P. and Grosse, R. 2009. SCAI acts as a suppressor of cancer cell invasion through the transcriptional control of β1-Integrin. Nat. Cell Biol. 11: 557-568.
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CHROMOSOMAL LOCATION

Genetic locus: SCAI (human) mapping to 9q33.3.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

SCAI siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SCAI shRNA Plasmid (h): sc-92937-SH and SCAI shRNA (h) Lentiviral Particles: sc-92937-V as alternate gene silencing products.

For independent verification of SCAI (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-92937A, sc-92937B and sc-92937C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SCAI siRNA (h) is recommended for the inhibition of SCAI expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SCAI gene expression knockdown using RT-PCR Primer: SCAI (h)-PR: sc-92937-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.